

CLAIMS

What is claimed is:

1. A method of displaying information in a window on a display device, said window displaying only part of its related information, the method comprising the steps of:

providing a window for displaying information; further comprising the step of

providing means for scrolling the window; and

displaying in the window a portion of its related information; and

receiving scroll initiate events, and

marking the displayed portion of window's related information as processed information and the rest of window's related information as not processed information; and

scrolling the window to a next portion of its related information; and

providing visual clues directing user's attention to area or areas of the window, which display not processed information.

2. The method of claim 1, further comprising the step of:

disabling the directing visual clues after a first predetermined amount of time.

3. The method of claim 2, further comprising the step of:

detecting whether the displayed portion of window's related information is displayed for more then a second predetermined of time; and

marking the displayed portion of window's related information as processed information and the rest of window's related information as not processed information if and only if the displayed portion of window's related information has been displayed for more then a second predetermined amount of time.

4. The method of claim 2,

wherein providing the directing visual clues is accomplished via displaying processed information and not processed information as visually different, which is accomplished by changing visual attributes of foreground and background of processed information, visual attributes of foreground and background of not processed information, or visual attributes of foreground and background of both processed and not processed information; said visual attributes are selected from the group consisting of at least: color, intensity, texture, contrast, brightness, orientation, gloss, line width, line pattern, line density, line fuzziness, blinking, movement, gradient, shadow, lighting, depth, image vagueness, font type, font size, font style, font format, size of visual components, after scrolling display time delay, as well as combinations and dynamic transformations of the above attributes.

5. The method of claim 4,

wherein providing the directing visual clues is accomplished via visual de-emphasis of processed information, said de-emphasis accomplished through changing visual attributes of the foreground and the background of visual image displaying processed information to make said visual image less salient.

6. The method of claim 4,

wherein providing the directing visual clues is accomplished via visual emphasis of not processed information, such as changing visual attributes of the foreground and the background of visual image displaying not processed information to make said visual image more salient

7. The method of claim 6,

wherein providing the directing visual clues is accomplished via visual emphasis of a part of not processed information, said part located near area, on which a user is likely to focus his or her attention immediately after scrolling.

8. The method of claim 2,

wherein providing the directing visual clues is accomplished via temporarily displaying a border separating area or areas of a window displaying processed information and area or areas of the said window displaying not processed information.

9. The method of claim 3, wherein providing the directing visual clues is accomplished via displaying an object or objects on the margin or margins of a window in the proximity of the area where not processed information is located in the said window after scrolling.

10. The method of claim 9, wherein orientation or shape of the marginal object or objects indicate the direction in which not processed information is located in the window relative to the marginal object or objects.

11. The method of claim 2,

wherein disabling the directing visual clues is performed so that said visual clues are being disabled gradually.

12. The method of claim 2, further comprising:

detecting the scrolling increment; and

detecting the direction of scrolling; and

detecting the input device or devices used for scrolling; and

detecting the type of scroll initiate event; and

selecting appropriate directing visual clues depending on one or more parameters selected from the group consisting of at least: scrolling increment, scrolling direction, input device used for scrolling, and type of scroll initiate event.

13. The method of claim 12, further comprising:

selecting one or more scrolling directions from the group consisting of at least: up, down, left, and right; and

associating a predetermined default location of information in a window to each of selected scrolling directions; and

comparing location of processed information in a window after scrolling with default location associated with direction of executed scrolling; and

disabling the directing visual clues if the location of processed information in a window after scrolling coincides with the default direction.

14. The method of claim 2,

wherein means are provided for defining an effective area as a rectangle within the window area; and

wherein only the portion of window's related information displayed in the effective area is marked as processed information and the rest of window's related information as not processed information.

15. The method of claim 14 further comprising the steps of

allowing a user to carry out small increment scrolling by using an input device that a user can use while controlling the screen pointer; and

allowing a user to dynamically define the effective area by moving screen pointer so that the Y coordinate of screen pointer is equal to the Y coordinate of the bottom of the effective area in the case of small increment downwards scrolling and/or the Y coordinate of screen pointer is equal the Y coordinate of the top of the effective area in the case of small increment upwards scrolling.

16. The method of claim 14, further comprising the step of:

providing a screen control or controls emerging in a window after small increment scrolling for a predetermined amount of time; and

allowing a user to define the effective area by dragging the emerging screen control or screen controls.

17. The method of claim 2,

wherein means are provided for a user to set one or more settings selected from a group consisting of at least: the first predetermined amount of time, the second predetermined amount of time, direction of scrolling, types of directing visual clues and their behaviors, parameters of the effective area, whether controls and methods for defining effective area are enabled or disabled, correspondence between parameters of scrolling and types of the determining visual clues, whether the determining visual clues are enabled or disabled.

18. A method of displaying information in a window on a display device, the method comprising the steps of:

providing a window for displaying information; further comprising the step of

providing means for resizing the window; and

displaying in the window a portion of its related information; and

receiving resize initiate events, and

marking the displayed portion of window's related information as processed information and the rest of window's related information as not processed information; and

resizing the window; and

providing visual clues helping a user to distinguish between area or areas of the window, which display processed information and area or areas of the window, which display not processed information; and

disabling the distinguishing visual clues after a predetermined amount of time.

19. An apparatus comprising:

means for displaying information in a window;

means for scrolling the window;

means for displaying in the window a portion of its related information;

means for receiving scroll initiate events;

means for marking the displayed portion of window's related information as processed information and the rest of window's related information as not processed information;

means for scrolling the window to a next portion of its related information;

means for providing visual clues directing user's attention to area or areas of the window, which display not processed information.

means for disabling the directing visual clues after a first predetermined amount of time.

20. The apparatus of claim 19, further comprising:

means for detecting whether the displayed portion of window's related information is displayed for more then a second predetermined of time; and

means for marking the displayed portion of window's related information as processed information and the rest of window's related information as not processed information if and only if the displayed portion of window's related information has been displayed for more then a second predetermined amount of time.

21. The apparatus of claim 19, further comprising:

means for providing directing visual clues via displaying processed information and not processed information as visually different.

22. The apparatus of claim 19, further comprising:

means for providing the directing visual clues via temporarily displaying a border separating area or areas of the window displaying processed information and area or areas of the window displaying not processed information.

23. The apparatus of claim 19, further comprising:

means for providing the directing visual clues via displaying an object or objects on the margin or margins of the window in the proximity of the area where not processed information is located in the window after scrolling.

24. The apparatus of claim 19, further comprising:

means for detecting the scrolling increment; and

means for detecting the direction of scrolling; and

means for detecting the input device or devices used for scrolling; and

means for detecting the type of scroll initiate event; and

means for selecting the directing visual clues depending on one or more parameters selected from the group consisting of at least: scrolling increment, scrolling direction, location of processed information in a window after scrolling, input device used for scrolling, and type of scroll initiate event.

25. The apparatus of claim 19, further comprising:

means for allowing a user to define a rectangle within the window area; and

means for marking the portion of window's related information displayed in the defined rectangle as processed information and the rest of window's related information as not processed information.

26. The apparatus of claim 19, further comprising:

means for allowing a user to set one or more settings selected from the group consisting of at least: the first predetermined amount of time, the second predetermined amount of time, types of determining visual clues and their behaviors, parameters of the defined rectangle, direction of scrolling, location of processed information in a window after scrolling, whether controls and methods for defining the defined rectangle are enabled or disabled, correspondence between parameters of scrolling and types of the determining visual clues, whether the determining visual clues are enabled or disabled, whether the determining visual clues are enabled or disabled for different types of scrolling.